

# **CHAPTER 6: INCIDENTAL CONSTRUCTION**

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### 601 Concrete Sidewalk and Median Filler

#### General ([Standard Specification 02776](#))

The top back of curb usually dictates the location and grade of a sidewalk. Sidewalk locations and grades, especially those not adjacent to curbs, are staked and checked well in advance of the work.

The Resident Engineer reviews the roadway typical section sheets of the plans to know the design and slope of the sidewalk, particularly in the vicinity of an approach or driveway. Once the sidewalk is constructed, Concern should be given to the development of the area behind the walk in regard to matching residential lawns, walks and steps in a practical and aesthetic manner.

Special attention is given to the timing of all utility structure alterations within or beneath the sidewalk so that this work is completed well in advance of the sidewalk construction. Additional reference can be found in [Standard Drawing](#).

### 602 Curb, Gutter, Driveway, and Disabled Pedestrian Ramp

#### ([Refer to Standard Specification 02771](#))

Good quality, properly constructed concrete curb and gutter, true to line and grade, is essential to the overall functioning of any construction project of which this item is a part. Storm water runoff from the adjacent pavement as well as from side streets, alleys, entrances and abutting properties is conveyed by the curb and gutter to inlets, storm drains or ditches where the drainage can be disposed of.

The curb serves as a means of traffic control at intersections and at traffic islands, delineating the limits of the traveled way and preventing encroachment of traffic onto sidewalks, medians, refuge areas and the like. The curb also serves as an effective means of entrance control from both the width and location of the entrance. It lends a finishing touch to the pavement and enhances total appearance of the project. Curb types B-1 thru B-4 are barrier curbs and it is important to insure the minimum curb height of 6" (B-2 8 inches) is obtained as noted in [Standard Drawings](#).

The Resident Engineer and project staff members responsible for construction must become totally familiar with the drainage layout, the curb and gutter, and the storm drain system and appurtenances, as shown on the plans. All aspects of surface

drainage affecting the project are carefully reviewed and inspected during the field staking, and any necessary revisions made in grade to accommodate actual field drainage conditions. The correct and final location of inlets is also determined during the staking.

Depressions in the curb to accommodate ramps for disabled persons as required at street corner radii are also located and referenced. Such ramps are constructed at locations shown on the plans and in accordance with the plan details and in accordance with [Standard Drawing](#).

### **603 Concrete Flatwork**

Do not allow the sprinkling of water onto the surface for finishing.

### **604 Asphalt Concrete Curb**

**General** [Standard Specification 02773](#)

This item is generally used as a means to control erosion where the type of soil and the grade are such that the quantity of water flowing would cause serious erosion if the gutter were not paved.

Asphalt Concrete curb is laid on a smooth firm surface, usually a surface treatment, to provide a base for the curb and smooth area for the curb machine. Any rough or poorly graded area under the curb machine will be reflected and magnified in the line and grade of the curb.

### **605 Flowable Fill**

**General** [\(Refer to Standard Specification 03575\)](#)

Flowable Fill is a fill material designed to place around both small conduits and large pipe in trenches to provide maximum density. Determine a suitable aggregate size and gradation for the intended application.

When placing Flowable fill around small conduits such as traffic loops that carry traffic loads. It is placed between a 5-inch and 7 inch slump, so that it gains strength in a shorter period of time. When fill will have a minimum of 2 inch of asphalt cover. Determine appropriate strength from the trial batches, before cover materials is placed on top.

When placing Flowable Fill around large pipe it is usually a very fluid mixture, between 5

inches and 10 inches. Bring the fill up to the bottom of the asphalt concrete or as shown on the plans. The inspector must check to make sure the contractor has sufficiently “tied down” the pipe so that it will not “float” when the fill is placed around it. If this occurs, a possible solution is to place the flowable fill to the spring line of the pipe (half way around) then allow the fill to harden before placing the remaining fill.

Fill must be batched no smaller than 2 cubic meters. This is to insure that complete mixing has occurred. Add the approved accelerator at the job site within 60 minutes after initial batching and mix for 70 revolutions at recommended RPM.

## **610 Right-of-Way Fence and Gate**

### **General** ([Refer to Standard Specification 02822](#))

The purpose of this item is to delineate the boundaries of land acquired for public right of way to discourage animals and people from entering the right-of-way area, and to discourage building encroachment upon State property.

### **Materials**

The [Standard Drawings](#) and Special Detail drawings included in the project plans will specify the material requirements. Prior to fence installation the required material certificates of compliance are submitted to the Resident Engineer. Wire and fabric gauges, post dimensions, material coatings, etc., are checked and verified by the field personnel before incorporation into the work.

### **Construction Operations**

#### **Location**

Before fence construction is started the Resident Engineer studies the plans with special attention being given to right-of-way lines, control-of-access lines, location of gates, cattle-guards, angle points, etc.

#### **Layout**

The Contractor in accordance with the plans and specifications performs the layout of the fence location.

#### **Construction**

Before incorporating any items of fencing into the project. All Certificates of Compliance must be submitted to the Resident Engineer. The Contractor will install and erect all items of the fencing to the Plans and Standard Specifications.

The Inspector will inspect all items of the fencing after it is completed and before the final inspection. The Inspector may reject any or all of the fencing if poor workmanship, defective

materials or erected beyond right-of-way line.

Good fence construction practice requires careful attention to line and grade. A string line may be used as a guide to complete the inspection of the alignment in the grade of the post tops as the posts are in their final position. A carpenter's level may be used to assure that posts are vertical. Concrete used for posts must meet the [Standard Specifications 03055](#). Bases are poured slightly above the surrounding ground and rounded on top to drain water. Wire and fabric is taut and spaced as shown the Plans with the specified clearance under the fabric to prevent children and small animals from crawling under the fence.

### **Measurement**

The Plans and Specifications are consulted for the proper limits of measurements. In the case of resetting railing or fencing, a measurement is taken prior to initial removal to account for possible lost or damaged material at a later date.

## **611 Chain Link Fence and Gate**

**General** ([Refer to Standard Specification 02821](#))

Refer to [Section 610, Right-of-Way Fence and Gate](#) in this manual and [Standard Drawing](#) for applicable information.

## **612 Right-of-Way Marker**

**General** ([Refer to Standard Specification 02896](#))

All materials needed for Right-of-Way Markers are furnished by the Contractor and installed as shown in Standard Drawing and according to the plans.

Considerable care is taken in setting right-of-way markers and survey monuments, as they become permanent control points for future survey work.

## **615 Reconstruct Cleanout, Meter**

Adequate information can be found in ([Refer to Standard Specification 01892](#))

## **616 Moving Mailbox and Street Sign**

Adequate information can be found in ([Refer to Standard Specifications 01891](#)) and [Standard Drawings](#).

## **619 Cattle Guard**

### **General** ([Refer to Standard Specification 02825](#))

The project plans will specify the location and type of cattle guards to be constructed. Each cattle guard is constructed in conformance with Standard Drawing or special drawings that may be included for pre-cast cattle guards.

Completed cattle guards are well drained by ditching to prevent ponding of water in the structure. Cattle guards are carefully constructed to the designed grade with special care being taken to achieve a bump free, smooth riding installation. Errors in the elevation of the cattle guard or the approach grade, whether resulting in a "bump up" or a "drop off" effect, need to be prevented or corrected as the case may be.

Finishing of exposed concrete surfaces will be as required for other structures.